

EXHIBIT B

PTO/SB/05 (05-05)

Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office. U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UTILITY PATENT APPLICATION TRANSMITTAL <small>(ONLY FOR NEW NONPROVISIONAL APPLICATIONS UNDER 37 CFR 1.53(B))</small>		Attorney Docket No. 543312000401 First Inventor Ravinder S. DHALLAN Title METHODS FOR DETECTION OF GENETIC DISORDERS Express Mail Label No. EV 664382207 US	
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APPLICATION ELEMENTS <small>See MPEP chapter 600 concerning utility patent application contents.</small>	ADDRESS TO: Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 ACCOMPANYING APPLICATION PARTS
1. <input checked="" type="checkbox"/> Fee Transmittal Form (e.g., PTO/SB/17) <small>(Submit an original and a duplicate for fee processing) (2 pages)</small> 2. <input checked="" type="checkbox"/> Applicant claims small entity status. <small>See 37 CFR 1.27.</small> 3. <input checked="" type="checkbox"/> Specification [Total Pages <u>404</u>] <small>Both the claims and abstract must start on a new page (For information on the preferred arrangement, see MPEP 608.01(a))</small> 4. <input checked="" type="checkbox"/> Drawing(s) (35 U.S.C. 113) [Total Sheets <u>33</u>] 5. <input type="checkbox"/> Oath or Declaration [Total Sheets <u> </u>] a. <input type="checkbox"/> Newly executed (original or copy) b. <input type="checkbox"/> A copy from a prior application (37 CFR 1.63(d)) <small>(for continuation/divisional with Box 18 completed)</small> i. <input type="checkbox"/> DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b). 6. <input checked="" type="checkbox"/> Application Data Sheet. See 37 CFR 1.76 (2 pages) 7. <input type="checkbox"/> CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix) <input type="checkbox"/> Landscape Table on CD 8. Nucleotide and/or Amino Acid Sequence Submission <small>(if applicable, items a. - c. are required)</small> a. Computer Readable Form (CRF) i. <input type="checkbox"/> Computer Readable Form (CRF) ii. <input type="checkbox"/> Transfer Request (37 CFR 1.821(e)) b. Specification Sequence Listing on: i. <input type="checkbox"/> CD-ROM or CD-R (2 copies); or ii. <input type="checkbox"/> Paper c. <input type="checkbox"/> Statements verifying identity of above copies	9. <input type="checkbox"/> Assignment Papers (cover sheet & document(s)) Name of Assignee: <div style="border: 1px solid black; height: 20px; width: 100%;"></div> 10. <input type="checkbox"/> 37 CFR 3.73(b) Statement <input type="checkbox"/> Power of Attorney <small>(when there is an assignee)</small> 11. <input type="checkbox"/> English Translation Document (if applicable) 12. <input type="checkbox"/> Information Disclosure Statement (PTO/SB/08 or PTO-1449) <input type="checkbox"/> Copies of foreign patent documents, publications, & other information 13. <input type="checkbox"/> Preliminary Amendment 14. <input checked="" type="checkbox"/> Return Receipt Postcard (MPEP 503) <small>(Should be specifically itemized)</small> 15. <input type="checkbox"/> Certified Copy of Priority Document(s) <small>(if foreign priority is claimed)</small> 16. <input type="checkbox"/> Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent. 17. <input type="checkbox"/> Other: <div style="border: 1px solid black; height: 40px; width: 100%;"></div>

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

☒ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: PCT/US2004/006337

Prior application information: Examiner Not Yet Assigned Art Unit: Not Yet Assigned

19. CORRESPONDENCE ADDRESS

☒ The address associated with Customer Number: 25226 OR ☐ Correspondence address below

Name			
Address			
City	State	Zip Code	
Country	Telephone	Email Address	

Signature		Date	August 26, 2005
Name (Print/Type)	Alicia J. Hager	Registration No. (Attorney/Agent)	44,140

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Dated: August 26, 2005

Signature: (Georgina Matos)

PTO/SB/17 (12-04v2)

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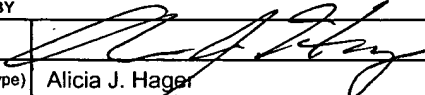
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Effective on 12/08/2004. Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818). FEE TRANSMITTAL For FY 2005		Complete if Known	
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27		Application Number	Not Yet Assigned
		Filing Date	Concurrently Herewith
		First Named Inventor	Ravinder S. DHALLAN
		Examiner Name	Not Yet Assigned
		Art Unit	Not Yet Assigned
TOTAL AMOUNT OF PAYMENT (\$) 1,700.00		Attorney Docket No.	543312000401

METHOD OF PAYMENT (check all that apply)	
<input type="checkbox"/> Check <input type="checkbox"/> Credit Card <input type="checkbox"/> Money Order <input type="checkbox"/> None <input type="checkbox"/> Other (please identify): _____	
<input checked="" type="checkbox"/> Deposit Account Deposit Account Number: <u>03-1952</u> Deposit Account Name: <u>Morrison & Foerster LLP</u>	
For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)	
<input checked="" type="checkbox"/> Charge fee(s) indicated below <input type="checkbox"/> Charge fee(s) indicated below, except for the filing fee	
<input checked="" type="checkbox"/> Charge any additional fee(s) or underpayment of fee(s) under 37 CFR 1.16 and 1.17 <input checked="" type="checkbox"/> Credit any overpayments	

FEE CALCULATION							
1. BASIC FILING, SEARCH, AND EXAMINATION FEES							
Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	500.00
Design	200	100	100	50	130	65	0.00
Plant	200	100	300	150	160	80	0.00
Reissue	300	150	500	250	600	300	0.00
Provisional	200	100	0	0	0	0	0.00
2. EXCESS CLAIM FEES							Small Entity Fee (\$)
Fee Description							Fee (\$)
Each claim over 20 (including Reissues)							50
Each independent claim over 3 (including Reissues)							200
Multiple dependent claims							360
Total Claims		Extra Claims	Fee (\$)	Fee Paid (\$)	Multiple Dependent Claims		
33		- 20 = 13	x 25.00 =	325.00	Fee (\$)		Fee Paid (\$)
					180.00		0.00
Indep. Claims		Extra Claims	Fee (\$)	Fee Paid (\$)			
3		- 3 = 0	x 100.00 =	0.00			
3. APPLICATION SIZE FEE							
If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
Total Sheets		Extra Sheets	Number of each additional 50 or fraction thereof		Fee (\$)	Fee Paid (\$)	
437		- 100 = 337	/50 7 (round up to a whole number) x		125.00	= 875.00	
4. OTHER FEE(S)							Fees Paid (\$)
Non-English Specification, \$130 fee (no small entity discount)							
Other (e.g., late filing surcharge):							0.00

SUBMITTED BY			
Signature		Registration No. (Attorney/Agent)	44,140
Name (Print/Type)	Alicia J. Hager	Telephone	(650) 813-4296
		Date	August 26, 2005

PTO/SB/05 (05-05)

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		First Inventor Ravinder S. DHALLAN	
		Title METHODS FOR DETECTION OF GENETIC DISORDERS	
		Express Mail Label No. EV 664382207 US	

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19. CORRESPONDENCE ADDRESS			
<input checked="" type="checkbox"/> The address associated with Customer Number: 25226 OR <input type="checkbox"/> Correspondence address below			
Name			
Address			
City		State	Zip Code
Country		Telephone	Email Address
Signature		Date	August 26, 2005
Name (Print/Type) Alicia J. Hager		Registration No. (Attorney/Agent) 44,140	

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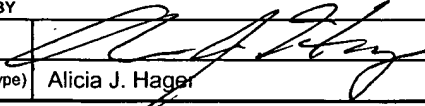
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Plant	200	100	300	150	160	80		0.00
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SUBMITTED BY			
Signature		Registration No. (Attorney/Agent)	44,140
Name (Print/Type)	Alicia J. Hager	Telephone	(650) 813-4296
		Date	August 26, 2005

METHODS FOR DETECTION OF GENETIC DISORDERS

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation of International Application No. PCT/US2004/006337, filed March 1, 2004, which is a continuation-in-part of International Application No. PCT/US03/06198, filed February 28, 2003, the contents of each of which are hereby incorporated by reference herein in their entirety. The contents of each of the following applications are also hereby incorporated by reference in their entirety herein: U.S. Provisional Application Serial No. 60/378,354, filed May 8, 2002; U.S. Patent Application Serial No. 10/093,618, filed March 11, 2002; and U.S. Provisional Application Serial No. 60/360,232, filed March 1, 2002.

BACKGROUND OF THE INVENTION

FIELD OF THE INVENTION

[0002] The present invention is directed to a method for the detection of genetic disorders including chromosomal abnormalities and mutations. The present invention provides a rapid, non-invasive method for determining the sequence of DNA from a fetus. The method is especially useful for detection of chromosomal abnormalities in a fetus including translocations, transversions, monosomies, trisomies, and other aneuploidies, deletions, additions, amplifications, translocations and rearrangements.

BACKGROUND ART

[0003] Chromosomal abnormalities are responsible for a significant portion of genetic defects in liveborn humans. The nucleus of a human cell contains forty-six (46) chromosomes, which contain the genetic instructions, and determine the operations of the cell. Half of the forty-six chromosomes originate from each parent. Except for the sex chromosomes, which are quite different from each other in normal males, the chromosomes from the mother and the chromosomes from the father make a matched set. The pairs were combined when the egg was fertilized by the sperm. Occasionally, an error occurs in either the formation or combination of chromosomes, and the fertilized egg is formed with too many or too few chromosomes, or with chromosomes that are mixed in some way. Because each chromosome contains many genes, chromosomal abnormalities are likely to cause serious birth defects, affecting many body systems and often including developmental disability (e.g., mental retardation).

[0004] Cells mistakenly can rejoin broken ends of chromosomes, both spontaneously and after exposure to chemical compounds, carcinogens, and irradiation. When rejoining occurs within a chromosome,